

A Monthly Publication of the Epidemiology Resource Center

Volume 9, Issue 12 December 2006

Norovirus: 'Tis the Season

Lynae Granzow, BS Enteric Epidemiologist

'Tis the season for snow, holidays, and noroviruses. Since November, this noro season has started off with a bang in outbreaks, particularly in long-term care (LTC) facilities. Although commonly called "stomach flu", it is important to not confuse *Norovirus* infection with influenza, a respiratory illness characterized by fever, sore throat, cough, and muscle aches. Although the seasonality of both *Norovirus* infection and influenza overlap, the transmission routes and prevention methods are very different.

Noroviruses are shed primarily in stool and are very easily transmitted by the fecal-oral route, e.g., consuming contaminated food or beverages or having close contact with someone who is ill. The predominant symptoms of *Norovirus* infection are nausea, diarrhea, and vomiting. Some people may experience a low-grade fever, chills, headache, muscle aches, and fatigue. This virus has a quick incubation period, ranging from 12-96 hours and averaging 24-48 hours. While there is no treatment available for *Norovirus* infection besides some good couch time and fluid replacement, ill persons will recover on their own within 1-2 days.

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Prevention is the key to limiting the spread of infection, since there is no effective treatment and people can be contagious up to two weeks after recovery. To help prevent *Norovirus* infection:

- Encourage good hand hygiene. Handwashing is best, since alcohol-based sanitizer gels may not be effective against *Norovirus*.
- Thoroughly wash contact surfaces and contaminated areas with a 1:10 dilution of bleach water. Bleach should be prepared daily and kept out of sunlight. Bleach disinfection of sensitive surfaces may be followed by disinfection with alcohol or other disinfectant to prevent damage.
- Exclude anyone who is symptomatic with diarrhea and/or vomiting from high-risk settings:
 - o Long-term care facilities
 - Health care facilities
 - o Daycare facilities
 - Food establishments

o Schools

Recommendations for Public Health Professionals

This is a good time to check the quantity and expiration dates of the ISDH 7A specimen submission containers. Since *Norovirus* season is under way, it is a good idea to have a sufficient quantity of 7A containers available. To report a gastrointestinal outbreak within your community, please contact your District Field Epidemiologist or Lynae Granzow at 317.234.2808.

Due to ISDH Laboratories changing facilities the following announcements are provided:

- 1. The new general ISDH Laboratories phone number (317-921-5500), will be covered effective January 16, 2007. Prior to January 16, 2007, the ISDH general lab number (317-233-8000) will still be covered.
- 2. The preferred method for requesting shipping containers including the 7A for enteric specimens is to send the request by e-mail to Containers@isdh.in.gov. This will not change after the move, which is planned to be completed by January 29, 2007.

REMINDER: all submitters must contact the appropriate staff at the ERC <u>prior</u> to submitting samples, so that the ERC can determine if the testing is of public health significance which requires ISDH Laboratory involvement.

Not Just for Winter Anymore....

Influenza Summer Surveillance

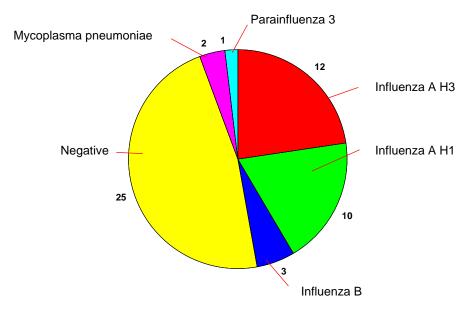
Shawn Richards, BS Respiratory Epidemiologist

The Indiana State Department of Health (ISDH) conducts enhanced (year-round) surveillance through the Influenza Sentinel Surveillance Program to determine when influenza is circulating, which influenza viruses are circulating, and to identify other respiratory disease outbreaks in Indiana. The ISDH has participated in enhanced surveillance for the past two years; however, this is the first year that the ISDH Laboratory has tested specimens during the summer months. The ISDH now has laboratory confirmation that influenza circulates during the summer as well as the fall, winter, and spring months.

The ISDH Laboratory tested 53 specimens from June-September 2006 (see Figure 1). Of the 53 specimens, 12 tested positive for Influenza A H3, 10 tested positive for Influenza A H1, 3 tested positive for Influenza B, 2 tested positive for *Mycoplasma pneumoniae* (institutional outbreak—see related Outbreak Spotlight article in the November Epidemiology Newsletter), 1 tested positive for parainfluenza virus type 3, and 25 tested negative.

Figure 1.





Total specimens tested = 53

Emergency Rule: Influenza Death Reporting

Shawn Richards, BS Respiratory Epidemiologist

The Indiana State Department of Health (ISDH) Executive Board has approved two actions regarding influenza death reporting. First, the Executive Board approved an emergency rule to require the reporting of laboratory-confirmed influenza deaths (please refer to LSA Document #06-517(E) on the following page). Effective immediately, the rule requires physicians and hospitals to report deaths of laboratory-confirmed cases of influenza to the local health officer within 72 hours of first knowledge of death. The change also drops the requirement for laboratory confirmation of influenza for those cases of influenza diagnosed based on clinical presentation during an influenza pandemic. Second, the Executive Board approved amending 410 IAC 1-2.3 to include the reporting of influenza deaths. This amendment must go through the formal promulgation process. That process will occur in early 2007.

State Form 52576 (02-06), Influenza-Associated Deaths Case Investigation, should be used to report influenza deaths. This form is available on the ISDH Web site at http://www.in.gov/isdh/form/pdfs/52576_InfluenzaAssocDeath.pdf. Local health departments should send completed forms to the ISDH Epidemiology Resource Center (ERC), Attn: Shawn Richards, via U.S. mail or by faxing them to the ERC at 317.234.2812.

This change is needed because Indiana's surveillance of influenza deaths is inadequate. Currently, influenza deaths are counted only when influenza is listed as a cause of death on a death certificate. Without reporting influenza deaths, we have no good means of determining changes in the relative virulence of circulating influenza strains. According to the CDC, there are 36,000 influenza and complications of influenza deaths in the United States every year. According to death certificates, there have been 101 influenza deaths in Indiana from 2002-2004. It is highly probable that we are severely underreporting influenza deaths in Indiana. Additionally, the CDC is requiring that states be able to monitor influenza deaths in the National Implementation Plan during a pandemic.

If you have questions or concerns about the change in reporting or use of State Form 52576, please contact Shawn Richards, Respiratory Epidemiologist, Epidemiology Resource Center, Indiana State Department of Health, 2 North Meridian Street, Indianapolis, Indiana 46204; 317.233.7740; srichard@isdh.IN.gov.

INDIANA STATE DEPARTMENT OF HEALTH

Emergency Rule LSA Document #06-517(E)

DIGEST

Temporarily requires the reporting of influenza associated human deaths to the department.

Authority: IC 4-22-2-37.1; IC 16-19-3-4; IC 16-41-1-2. Effective November 10, 2006.

- SECTION 1. The definitions in this document apply throughout this document.
- SECTION 2. "Commissioner" means the state health commissioner or authorized officers, employees, or agents of the department.
- SECTION 3. "Department" means the Indiana State Department of Health.
- SECTION 4. "Local health officer" means the county/city health officer or authorized officers, employees, or agents of the county/city health department.
- SECTION 5. "Pandemic influenza activity" means influenza infection caused by a novel influenza virus for humans, which is efficiently transmitted from person to person, and that results in moderate or severe illness.
- SECTION 6. It shall be the duty of each physician licensed under IC 25-22.5, and each administrator of a hospital licensed under IC 16-21, or the administrator's representative, to report the following:
- (a) A human death in which an influenza diagnosis has been detected in the deceased by:
 - 1. Commercial rapid antigen testing;
 - 2. Viral culture;
 - 3. Direct Fluorescent Antibody (DFA);

- 4. Indirect Fluorescent Antibody (IFA);
- 5. Enzyme immunoassay;
- 6. Reverse transcriptase-polymerase chain reaction (RT-PCR); or,
- 7. Immunohistochemistry (IHC).
- (b) A human death in which a strong probability of influenza has been detected in the deceased based on clinically compatible symptoms under the following circumstances:
- 1. An Influenza Pandemic has been declared by the World Health Organization (WHO);
- 2. Known pandemic influenza activity is occurring in the United States as determined by the Centers for Disease Control and Prevention (CDC); or
- 3. Known pandemic influenza activity is occurring in the local community as determined by the commissioner.
- SECTION 7. Reporting of specimen results by a laboratory to health officials does not nullify the physician's or administrator's obligations under SECTION 6 to report said death.
- SECTION 8. The report required by SECTION 6 shall be made to the local health officer in whose jurisdiction the patient was examined at the time the diagnosis was made. If the deceased was a resident of a different jurisdiction, the local health jurisdiction receiving the report shall immediately forward the report to the local health jurisdiction where the patient resided. If a person who is required to report is unable to make a report to the local health officer within the time mandated by this rule, a report shall be made directly to the department within the time mandated by this rule.

SECTION 9. A report shall include the following:

- (a) The deceased's:
 - 1. Full name;
 - 2. street address;
 - 3. city;
 - 4. zip code;
 - 5. county of residence;
 - 6. telephone number;
 - 7. age or date of birth;
 - 8. sex; and
 - 9. race and ethnicity.
- (b) Date of onset.
- (c) Diagnosis.
- (d) Definitive diagnostic test results
- (e) Name, address, and telephone number of the attending physician.
- (f) Other epidemiologically necessary information requested by the local health officer or the commissioner.
 - (g) Name, address, and telephone number of person completing the report.

SECTION 10. The death shall be reported to the local health officer within seventy-two (72) hours of first knowledge of death by telephone, electronic data transfer, other confidential means of communication, or official report forms furnished by the department.

SECTION 11. SECTIONS 1-10 of this document take effect November 10, 2006.



Training Room

INDIANA STATE DEPARTMENT OF HEALTH IMMUNIZATION PROGRAM PRESENTS:

Immunizations from A to Z

Immunization Health Educators offer this FREE, one-day educational course that includes:

- Principles of Vaccination
- Childhood and Adolescent Vaccine-Preventable Diseases
- Adult Immunizations
 - o Pandemic Influenza
- General Recommendations on Immunization
 - o Timing and Spacing
 - o Indiana Immunization Requirements
 - Administration Recommendations
 - Contraindications and Precautions to Vaccination
- Safe and Effective Vaccine Administration
- Vaccine Storage and Handling
- Vaccine Misconceptions
- Reliable Resources

This course is designed for all immunization providers and staff. Training manual, materials, and certificate of attendance are provided to all attendees. Please see the Training Calendar for presentations throughout Indiana. Registration is required. To attend, schedule/host a course in your area or for more information, please reference

http://www.IN.gov/isdh/programs/immunization.htm

ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

http://www.IN.gov/isdh/dataandstats/data_and_statistics.htm

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HIV/STD Quarterly Reports (1998-June 06)	Indiana Mortality Report		
	(1999, 2000, 2001, 2002, 2003, 2004)		
Indiana Cancer Incidence Report	Indiana Infant Mortality Report		
(1990, 95, 96, 97, 98)	(1999, 2002, 2003, 2004)		
Indiana Cancer Mortality Report	Indiana Natality Report		
(1990-94, 1992-96)	(1998, 99, 2000, 2001, 2002, 2003, 2004)		
Combined Concer Montality and Incidence in	Indiana Induced Termination of Pregnancy		
Combined Cancer Mortality and Incidence in	Report		
Indiana Report (1999, 2000, 2001, 2002)	(1998, 99, 2000, 2001, 2002, 2003, 2004)		
Indiana Health Behavior Risk Factors	Indiana Marriage Report		
(1999, 2000, 2001, 2002, 2003, 2004, 2005)	(1995, 97, 98, 99, 2000, 2001, 2002)		
Indiana Health Behavior Risk Factors (BRFSS)			
Newsletter (9/2003, 10/2003, 6/2004, 9/2004,	Indiana Infectious Disease Report		
4/2005, 7/2005, 12/2005, 1/2006, 8/2006,	(1997, 98, 99, 2000, 2001, 2002, 2003)		
10/2006)			
	Indiana Maternal & Child Health Outcomes &		
Indiana Hagnital Congumer Guida (1006)	Performance Measures		
Indiana Hospital Consumer Guide (1996)	(1990-99, 1991-2000, 1992-2001, 1993-2002,		
	1994-2003)		
Public Hospital Discharge Data			
(1999, 2000, 2001, 2002, 2003, 2004, 2005)			

HIV Disease Summary

Information as of November 30, 2006 (based on 2000 population of 6,080,485)

HIV - without AIDS to date:

387	New HIV cases from December 2005 thru November 2006	12-month incidence	6.73 cases/100,000
3,650	Total HIV-positive, alive and without AIDS on November 30, 2006	Point prevalence	63.46 cases/100,000
AIDS ca	ses to date:		
363	New AIDS cases from December 2005 thru November 2006	12-month incidence	6.31 cases/100,000
4,261	Total AIDS cases, alive on November 30, 2006	Point prevalence	74.08 cases/100,000
8,596	Total AIDS cases, cumulative (alive and dead)	_	

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in November MMWR Weeks 44-48		Cumulative Cases Reported January – November MMWR Weeks 1-48	
	2005	2006	2005	2006
Campylobacteriosis	38	65	419	522
Chlamydia	1,811	1,859	18,419	18,240
E. coli O157:H7	9	5	68	81
Hepatitis A	2	1	19	30
Hepatitis B	7	6	40	53
Invasive Drug Resistant S. pneumoniae (DRSP)	16	27	176	152
Invasive pneumococcal (less than 5 years of age)	9	11	68	65
Gonorrhea	760	755	7,451	8,040
Legionellosis	5	4	31	36
Lyme Disease	0	2	31	21
Measles	0	0	33	1
Meningococcal, invasive	0	2	18	23
Mumps	0	0	1	10
Pertussis	36	31	312	224
Rocky Mountain Spotted Fever	1	0	1	7
Salmonellosis	52	50	595	808
Shigellosis	24	31	175	157
Syphilis (Primary and Secondary)	2	9	57	86
Tuberculosis	13	11	125	110
Animal Rabies	0	0	11 (bats)	11 (bats)

For information on reporting of communicable diseases in Indiana, call the *Epidemiology Resource Center* at 317,233.7125.



Epidemiology Resource Center 2 North Meridian Street, 5 K Indianapolis, IN 46204 317/233-7125

Cover photo of Cryo-EM reconstruction of a norovirus capsid.courtesy of Dr. B.V.V. Prasad, Baylor College of Medicine, Houston, TX 77030 The *Indiana Epidemiology Newsletter* is published monthly by the Indiana State Department of Health to provide epidemiologic information to Indiana health care professionals, public health officials, and communities.

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